

Appl. No. 09/673,707
Amtd. dated September 19, 2005
Amendment under 37 CFR 1.116 Expedited Procedure
Examining Group 1645

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) An immunotoxin comprising a cytotoxin attached to an anti-gp120 antibody having the binding specificity to the CD4 binding site of gp120 of 3B3 Fv (SEQ ID NO:1) and a minimum binding affinity to gp-120 of 3B3 Fv (SEQ ID NO:1), wherein said immunotoxin specifically binds to and kills mammalian cells infected with HIV-1.
2. (Original) The immunotoxin of claim 1, wherein said cytotoxin is selected from the group consisting of ricin, abrin, a modified diphtheria toxin, and a modified *Pseudomonas* exotoxin.
3. (Original) The immunotoxin of claim 2, wherein said cytotoxin is a modified *Pseudomonas* exotoxin.
4. (Previously presented) The immunotoxin of claim 3, wherein said modified *Pseudomonas* exotoxin is selected from the group consisting of PE38, PE40, PE38KDEL (KDEL = SEQ ID NO:9), and PE38REDL (RDEL = SEQ ID NO:10).
5. (Original) The immunotoxin of claim 4, wherein said modified *Pseudomonas* exotoxin is PE38.
6. (Original) The immunotoxin of claim 1, wherein said antibody is selected from the group consisting of a single-chain Fv (scFv), a single-chain Fab (scFab), and a disulfide stabilized Fv (dsFv).
7. (Original) The immunotoxin of claim 6, wherein said antibody is a recombinantly expressed single-chain Fv.

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8. (Canceled)

9. (Original) The immunotoxin of claim 1, wherein said immunotoxin is a fusion protein.

10. (Canceled)

11. (Original) The immunotoxin of claim 1, wherein said immunotoxin is suspended or dissolved in a pharmaceutically acceptable carrier or excipient.

12-18. Canceled.

19. (Withdrawn-currently amended) A single chain Fv antibody having the binding specificity of 3B3 Fv (SEQ ID NO:1).

20. (Withdrawn-currently amended) The antibody of claim 19, wherein said antibody has the amino acid sequence of 3B3 Fv (SEQ ID NO:1) or conservative substitutions thereof.

21. (Withdrawn-currently amended) The antibody of claim 20, wherein said antibody is 3B3(Fv)Fv (SEQ ID NO:1).

22. (Withdrawn-currently amended) A nucleic acid that encodes a single chain Fv antibody having the binding specificity of 3B3 Fv (SEQ ID NO:1).

23. (Withdrawn-currently amended) The nucleic acid of claim 22, wherein said antibody has the amino acid sequence of 3B3 Fv (SEQ ID NO:1) or conservative substitutions thereof.

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24. (Withdrawn-currently amended) The nucleic acid of claim 20, wherein said nucleic acid encodes the 3B3 antibody (SEQ ID NO:1).

25-51. Canceled.

52. (Currently amended) A kit for killing cells that display a gp120 protein, said kit comprising a container containing an immunotoxin comprising a cytotoxin attached to an anti-gp120 antibody having the binding specificity to the CD4 binding site of gp120 of 3B3 Fv (SEQ ID NO:1) and a minimum binding affinity to gp-120 of 3B3 Fv (SEQ ID NO:1), wherein said immunotoxin specifically binds to and kills mammalian cells infected with HIV-1.

53. (Original) The kit of claim 52, wherein said cytotoxin is selected from the group consisting of ricin, abrin, a modified diphtheria toxin, and a modified *Pseudomonas* exotoxin.

54. (Original) The kit of claim 53, wherein said cytotoxin is a modified *Pseudomonas* exotoxin.

55. (Currently amended) The kit of claim 53, wherein said immunotoxin is 3B3(Fv) Fv (SEQ ID NO:1) attached to a modified *Pseudomonas* exotoxin.

56. (Canceled)

57. (Previously presented) An immunotoxin of claim 1, wherein said immunotoxin is a disulfide-stabilized ("ds") FV.

58. (Canceled)

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59. (Withdrawn-currently amended) A nucleic acid that encodes a single chain fusion protein, said nucleic acid comprising:

- (a) a nucleic acid sequence that encodes a single-chain antibody having the binding specificity of 3B3 Fv (SEQ ID NO:1); and
- (b) a nucleic acid sequence that encodes a cytotoxin.

60. (Withdrawn) A nucleic acid of claim 59, wherein said cytotoxin is selected from the group consisting of ricin, abrin, a modified diphtheria toxin, and a modified *Pseudomonas* exotoxin.

61. (Withdrawn) A nucleic acid of claim 59, wherein said modified *Pseudomonas* exotoxin is selected from the group consisting of PE38, PE40, PE38KDEL (KDEL = SEQ ID NO:9), and PE38REDL (RDEL = SEQ ID NO:10).

62. (Withdrawn) A nucleic acid of claim 61, wherein said modified *Pseudomonas* exotoxin is PE38.

63. (Withdrawn) A nucleic acid of claim 59, wherein said antibody is selected from the group consisting of a single-chain Fv (scFv), a single-chain Fab (scFab), and a disulfide stabilized Fv (dsFv).

64. (Withdrawn) A nucleic acid of claim 63, wherein said antibody is a recombinantly expressed single chain Fv.

65. (Withdrawn) A nucleic acid of claim 63, wherein said antibody is a dsFv.

66-67. (Canceled)

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68. (Currently amended) A composition, said composition comprising:
a pharmaceutically acceptable carrier or excipient; and
an immunotoxin comprising a cytotoxin attached to an anti-gp120 antibody
having the binding specificity of 3B3 Fv (SEQ ID NO:1).

69. (Previously presented) A composition of claim 68, wherein said cytotoxin
is selected from the group consisting of ricin, abrin, a modified diphtheria toxin, and a modified
Pseudomonas exotoxin.

70. (Previously presented) A composition of claim 69, in which said modified
Pseudomonas exotoxin is selected from the group consisting of PE38, PE40, PE38KDEL (KDEL
= SEQ ID NO:9), and PE38REDL (RDEL = SEQ ID NO:10).

71. (Previously presented) A composition of claim 70, wherein said modified
Pseudomonas exotoxin is PE38.

72. (Previously presented) A composition of claim 68, wherein said antibody
is selected from the group consisting of a single-chain Fv (scFv), a single-chain Fab (scFab), and
a disulfide stabilized Fv (dsFv).

73. (Previously presented) A composition of claim 72, wherein said antibody
is a recombinantly expressed single-chain Fv.

74. (Currently amended) A composition of claim 73, wherein said antibody is
3B3(Fv) Fv (SEQ ID NO:1).

75. (Previously presented) A composition of claim 72, wherein said antibody
is a dsFv.

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76. (Cancelled)

77. (Previously presented) A composition of claim 72, wherein said immunotoxin is a fusion protein.

78. (Cancelled)

79. (Withdrawn-currently amended) A method of killing or inhibiting the growth of a cell displaying a gp120 protein or fragment thereof, said method comprising contacting said cell with an immunotoxin comprising a cytotoxin attached to an anti-gp120 antibody having the binding specificity of 3B3 Fv (SEQ ID NO:1).

80. (Withdrawn) A method of claim 79, wherein said cytotoxin is selected from the group consisting of ricin, abrin, a modified diphtheria toxin, and a modified *Pseudomonas* exotoxin.

81. (Withdrawn) A method of claim 80, wherein said modified *Pseudomonas* exotoxin is selected from the group consisting of PE38, PE40, PE38KDEL (KDEL = SEQ ID NO:9), and PE38REDL (RDEL = SEQ ID NO:10).

82. (Withdrawn) A method of claim 81, wherein said modified *Pseudomonas* exotoxin is PE38.

83. (Withdrawn) A method of claim 79, wherein said antibody is selected from the group consisting of a single-chain Fv (scFv), a single-chain Fab (scFab), and a disulfide stabilized Fv (dsFv).

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84. (Withdrawn) A method of claim 83, wherein said antibody is a recombinantly expressed single-chain Fv.
85. (Withdrawn) A method of claim 83, wherein said antibody is 3B3(Fv).
86. (Withdrawn) A method of claim 83, wherein said antibody is a dsFv.
87. (Withdrawn) A method of claim 83, wherein said antibody is 3B3(dsFv).
88. (Withdrawn) A method of claim 83, wherein said immunotoxin is a fusion protein.
89. (Cancelled)
90. (Withdrawn-currently amended) A method of killing or inhibiting the growth of cells bearing gp120 protein or fragment thereof, said method comprising administering to an organism containing said cells a composition comprising:
a pharmaceutically acceptable carrier or excipient; and
an immunotoxin comprising a cytotoxin attached to an anti-gp120 antibody having the binding specificity of 3B3 Fv (SEQ ID NO:1) and minimum affinity of 3B3 Fv (SEQ ID NO:1).
91. (Withdrawn) A method of claim 90, wherein said cytotoxin is selected from the group consisting of ricin, abrin, a modified diphtheria toxin, and a modified *Pseudomonas* exotoxin.

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92. (Withdrawn) A method of claim 91, wherein said modified *Pseudomonas* exotoxin is selected from the group consisting of PE38, PE40, PE38KDEL (KDEL = SEQ ID NO:9), and PE38REDL (RDEL = SEQ ID NO:10).
93. (Withdrawn) A method of claim 91, wherein said modified *Pseudomonas* exotoxin is PE38.
94. (Withdrawn) A method of claim 90, wherein said antibody is selected from the group consisting of a single-chain Fv (scFv), a single-chain Fab (scFab), and a disulfide stabilized Fv (dsFv).
95. (Withdrawn) A method of claim 94, wherein said antibody is a recombinantly expressed single-chain Fv.
96. (Withdrawn) A method of claim 94, wherein said antibody is 3B3(Fv).
97. (Withdrawn) A method of claim 94, wherein said antibody is a dsFv.
98. (Canceled)
99. (Withdrawn) A method of claim 90, wherein said immunotoxin is a fusion protein.
100. (Canceled)
101. (Withdrawn) A method of claim 90, further comprising administering to said organism a protease inhibitor.

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102. (Withdrawn) A method of claim 90, further comprising administering to said organism a reverse transcriptase inhibitor.

103. (Withdrawn) A method of claim 90, further comprising administering to said organism both a protease inhibitor and a reverse transcriptase inhibitor and then withdrawing the reverse transcriptase inhibitor while maintaining protease inhibitor dosing during administration of said composition.